

sets in, blowing from the west, and gradually ascends the mountain sides; then, clouds rapidly form and soon there falls over the land rain that often continues till nighttime. About 9 or 10 p. m. the sea breeze ceases and shortly after that the descending land wind sets in; this is a dry wind; the clouds break away, the stars appear, the rest of the night is clear.

In the winter months the westerly winds of the Hawaiian Islands are caused by barometric depressions that pass in an eastward direction to the north of the islands. In such cases the wind begins to freshen up from the south and veers gradually to the southwest, many times accompanied by thunderstorms with cloudbursts of rain and not unfrequently increasing to a severe storm. After it has stormed for a while from this direction, the wind suddenly jumps to the northwest, then follows clearing-up weather, and soon after that the northeast trade again begins. The storm wind just described, which by the natives is called Kona, because it prevails principally on the Kona side, that is to say, the lee or the southwest side, has a duration of from a few hours to two or even three days. It is seldom strong enough on land to injure the houses, but occasionally interrupts navigation between the islands, as for example, in 1868. During the cruise of the English naval vessel *Petrel* among the Hawaiian Islands in September, October, and a part of November, 1875, the trade wind was often interrupted by southerly winds and calms with rain, except in the passages between the islands, where it seldom failed. On the west and southwest coast of Maui southeasterly winds prevailed, but which were occasionally replaced by the northeast trade which blows steadily over the isthmus of this island.

The island of Maui consists of a northwestern mountainous portion and a southeastern portion containing much higher mountains; between these is the connecting isthmus of comparatively low land to which the author of the Handbook evidently refers.

With regard to the depth of the layer of air involved in the movement of the northeast trade wind, the Handbook says:

On Mauna Loa and Mauna Kea, the two great mountains of the island of Hawaii, we do not generally find the trade wind blowing above 2,500 meters, no matter how strong it may be blowing below. From 2,500 up to 3,800 meters, calms prevail, and above that the current of wind has the opposite direction. In a corresponding manner the lower trade-wind clouds move from northeast to southwest, while the upper cirrus clouds move in the opposite direction, from southwest to northeast. The altitudes from 1,100 to 2,100 meters, are almost always on Hawaii enveloped in clouds, but from the upper portion of Mauna Loa (altitude, 13,760 feet) one looks out upon a sky that is always clear in summer and of wonderful purity. The summit of Haleakala, on the

island of Maui, more than 160 kilometers distant toward the northwest, appears sharp and clear above the ocean of clouds, like a dome above a field of snow. The storms that prevail on these peaks appear to come from the southwest or the northwest.—[C. A.]

MEXICAN CLIMATOLOGICAL DATA.

Through the kind cooperation of Señor Mariano Bárcena, Director, and Señor José Zendejas, vice-director, of the Central Meteorológico-Magnetic Observatory, the monthly summaries of Mexican data are now communicated in manuscript, in advance of their publication in the *Boletín Mensual*; an abstract translated into English measures is here given in continuation of the similar tables published in the MONTHLY WEATHER REVIEW during 1896. The barometric means have not been reduced to standard gravity, but this correction will be given at some future date when the pressures are published on our Chart IV.

Mexican data for September, 1897.

Stations.	Altitude.	Mean barometer.	Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
			Max.	Min.	Mean.			Wind.	Cloud.
Artega (Coahuila)...	<i>Feet.</i>	<i>Inch.</i>	<i>° F.</i>	<i>° F.</i>	<i>° F.</i>	<i>%</i>	<i>Inch.</i>		
Barousse	5,414		88.9	58.6	70.2	0.55			
Collma	1,866		78.4	59.2	67.6	0.75			
Durango	6,241	24.10	80.6	45.0	65.2	51	1.82	e.	
Leon	5,334	24.34	80.1	43.0	65.1	66	2.44	ene.	e.
Linares (New Leon)...	1,188		91.4	51.8	71.4	71	3.27		
Magdalena (Sonora)...	4,948				81.1	5.55	ne.	ne.	
Merida	50	29.89	96.6	67.1	80.8	77	1.69	n.	w.
Mexico (Obs. Cent.)...	7,473	23.11	75.6	44.6	59.9	71	5.62	nw.	ne.
Mexico (E. N. de S.)...		23.09	80.2	46.4	61.9	66	5.91	ne.	
Monclova (Coahuila)...	1,926		91.0	64.6	81.9	0.55			
Monterey	1,625	23.27	91.9	54.0	76.1	72	5.40	e.	se.
Morelia (Seminario)...	6,401	24.01	73.2	46.9	58.5	77	5.73	ne.	e.
Oaxaca	5,164	25.10	84.2	48.4	68.0	75	3.68	nw.	e.
Parras (Coahuila)...	3,986		80.8	60.6	68.5	1.50			
Puebla (Col. Cat.)...	7,112	23.40	79.5	38.3	67.5	59	7.00		
Queretaro	6,070	24.24	77.0	45.9	63.7	66	3.30	e.	
Saltillo (Col. S. Juan)...	5,399	24.89	84.7	49.1	67.8	62	0.47	w.	se.
San Luis Potosi	6,202	24.16	74.7	47.7	63.7	70	1.28	e.	se.
Sierra Mojada (Coah)...			96.4	54.0	75.0	0.28			
Torreón (Coahuila)...	3,730		85.4	65.1	81.3	1.38			
Vaqueria (Coahuila)...			83.1	50.5	66.9	3.66			
Zacatecas	8,015	22.57	74.3	40.3	61.3	71	3.89	e.	e.

METEOROLOGICAL TABLES.

By A. J. HENRY, Chief of Division of Records and Meteorological Data.

For text descriptive of tables and charts see page 357 of REVIEW for August, 1897.